IBM Cognos PowerPlay Studio
Version 10.2.0

User Guide

Note
Before using this information and the product it supports, read the information in "Notices" on page 57.

Product Information

This document applies to IBM Cognos Business Intelligence Version 10.2.0 and may also apply to subsequent releases. To check for newer versions of this document, visit the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp).

Contents

Introduction

This document is intended for use with IBM® Cognos® PowerPlay® Studio.

Audience

To use this document, you should have

- knowledge of business analysis concepts
- knowledge of your business requirements

Finding information

To find IBM Cognos product documentation on the web, including all translated documentation, access one of the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp). Release Notes are published directly to Information Centers, and include links to the latest technotes and APARs.

You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

Accessibility features

IBM Cognos PowerPlay Studio does not currently support accessibility features that help users with a physical disability, such as restricted mobility or limited vision, to use this product.

Forward-looking statements

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

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Chapter 1. PowerPlay Studio

You use IBM Cognos PowerPlay Studio to create and view reports that are based on PowerCube data sources.

You access PowerPlay Studio from the IBM Cognos Business Intelligence portal, IBM Cognos Connection. IBM Cognos Connection provides a single access point to all corporate data available in IBM Cognos BI. You can use IBM Cognos Connection to work with entries such as reports, analyses, queries, agents, metrics, and packages. You can use IBM Cognos Connection to create shortcuts, URLs, and pages, and to organize entries. You can personalize IBM Cognos Connection for your own use. You can also use it to create and run agents and schedule entries.

In IBM Cognos BI, report authors access data sources, including cubes, through packages. You do not connect directly to a cube as you do in IBM Cognos Series 7. First, an IBM Cognos BI administrator creates a data source connection to the cube. Using Framework Manager, a modeler builds a model from the data source and then publishes packages to make the data available to report authors. Optionally, for PowerCube data sources, the administrator can choose to automatically generate a package when they create the data source connection, eliminating the need to create the package in Framework Manager.

To create a new report, you open a package in PowerPlay Studio, select the data and format for the report, and then save the report to IBM Cognos Connection. In IBM Cognos Connection, the default action for PowerPlay reports is set to open the report in interactive format in PowerPlay Studio Explorer. You can change the report properties so the default action is to open the report in PDF format in a Report Viewer. Regardless of the default action setting, a report consumer can choose to open the report in either PDF format or interactive format.

The administrator can configure IBM Cognos BI to allow anonymous access to IBM Cognos Connection. However, if you access IBM Cognos Connection without providing authentication information and then attempt to open a secured packaged, IBM Cognos BI will prompt you for credentials.

How is IBM Cognos PowerPlay Studio Different from IBM Cognos Series 7 PowerPlay Web?

IBM Cognos PowerPlay Studio lets you view, explore, format, and distribute reports, just as you did with IBM Cognos Series 7 PowerPlay Web.

While the user experience should be very familiar to PowerPlay Web users, there are some differences in PowerPlay Studio.

IBM Cognos BI User Interface

The default appearance of the PowerPlay Studio interface is consistent with the other IBM Cognos BI studios. Compared to PowerPlay Web, there are differences in colors, fonts, and icons used in the interface as well as the appearance of PDF, XLS, and HTML output. The PowerPlay administrator can change the configuration to use alternate interface types that preserve the IBM Cognos Series 7 appearance.

Most menu options and application messages remain the same as those in IBM Cognos Series 7 PowerPlay Web. As in IBM Cognos Series 7, the administrator can set the interface type in IBM Cognos Administration.

Supported Data Sources

PowerCubes are the only data source supported for IBM Cognos PowerPlay.

Unlike IBM Cognos Series 7, in IBM Cognos BI report authors do not connect directly to a PowerCube. Instead they connect to a package that administrators or modelers create using a data source connection to the PowerCube. All IBM Cognos BI studios access data sources through packages.

After launching PowerPlay Studio, a user can see all packages available in Cognos Connection. However, the user can not select packages that are not supported for use in PowerPlay Studio.

Agents and Notifications

In IBM Cognos BI, Event Studio provides agent and notification functionality that is similar to what IBM Cognos NoticeCast provides in IBM Cognos Series 7. However, they are managed differently in IBM Cognos BI. PowerPlay Studio does not include commands or toolbar buttons related to agents or notifications. Also, PowerPlay Studio Viewer does not support IBM Cognos BI watch items.

Event Studio integration for PowerPlay reports does not support reports created using packages that use more than one PowerCube data source connection, or reports created using a password-protected PowerCube data source. For PowerPlay reports that use a secured package, you must log on with the appropriate credentials before starting Event Studio or running Event Studio agents.

Drill Through

IBM Cognos BI includes a drill-through service that is used by all IBM Cognos BI studios. When you click the drill-through button in PowerPlay Studio

- if only one drill-through target is available, the target report or package opens
- if more than one drill-through target available, you are presented with a list of drill-through targets to choose from.

In both IBM Cognos Series 7 and IBM Cognos BI, a modeler can define drill through in a cube using Transformer, with any additional settings configured in the administration tool. Also, if you migrate your IBM Cognos Series 7 content to IBM Cognos BI, any drill through settings you have defined in PowerPlay Enterprise Server for the cubes or reports will be migrated to IBM Cognos BI.

In IBM Cognos BI you can create package-based drill through definitions from the **Launch** menu in IBM Cognos Connection. Using this type of drill through, you do not have to rebuild the cube to add or change drill through targets.

Error Handling

When errors occur in IBM Cognos BI, a dialog box appears which includes a **Details** button and a detailed trace. Detail information and tracing is available for IBM Cognos PowerPlay errors.

Cube File Name in the Report Title

In IBM Cognos PowerPlay Studio, the name specified in the PowerCube name property in Transformer is used when you insert the Cube File Name into the report title. In IBM Cognos Series 7, the Cube File Name is based on the name that was set when the cube was inserted in PowerPlay Enterprise - Server Administration.

View Reports in PDF Format

For consistency with other IBM Cognos BI studios, Cognos Viewer displays PDF format PowerPlay reports. For PowerPlay reports, Cognos Viewer includes similar tools when compared to IBM Cognos Series 7 PowerPlay Web Viewer. For example, a user can choose to open the report in PowerPlay Studio for further exploration.

The administrator can change the default report viewer setting from Cognos Viewer to PowerPlay Studio Report Viewer to provide a report viewer that is similar to IBM Cognos Series 7 PowerPlay Web Viewer.

Save and save as options are not available for PowerPlay reports in either report viewer.

Encoding for Export to CSV Format

In IBM Cognos Series 7, export to .csv file format used the native encoding of the server.

In PowerPlay Studio, export to .csv file format uses UTF-16 encoding, which is consistent with existing IBM Cognos BI behavior.

Rendering for Export to Microsoft Excel Format

In IBM Cognos Series 7 PowerPlay Web, when you export a report to a Microsoft Excel format and choose to open the file, the file opens in a Microsoft Excel spreadsheet software window.

In IBM Cognos PowerPlay Studio, when you export a report to a Microsoft Excel format and choose to open the file, the file opens in a Microsoft Excel browser window. Opening the file in a browser window is consistent with export from other IBM Cognos BI studios.

PowerPlay Studio Explorer

IBM Cognos PowerPlay Studio Explorer provides a comprehensive tool set to support a multidimensional approach to business analysis. It lets you examine many combinations of the key dimensions and measures in your data. You can determine the impact that each area of your business has on overall results and compare that with other dimensions as you explore and analyze further.

When exploring information you can

- add your own calculations to the results
- filter data
- suppress, highlight, and sort values

- choose the type of display, such as crosstab, pie chart, or bar chart, and the amount of data shown
- publish, export, print, or bookmark reports

When you open a cube or report in PowerPlay Studio Explorer, the data appears in the display type specified by your administrator.

- Enhanced

  There are two enhanced display options, both provide the same functionality. The default display type, **Enhanced - IBM Cognos BI**, is consistent with other IBM Cognos BI studios. The **Enhanced - Series 7** display type preserves the same appearance as IBM Cognos Series 7 PowerPlay Web.

- Generic

  Your administrator may select the generic display type to improve user response times for low network bandwidth environments, such as dial up lines. Also, the generic display works with Web browsers that do not support enhanced Java-based Web pages. While the user interface options are different in the generic display compared to the enhanced display, you can achieve the same results in both display types.

The PowerPlay Studio Explorer Interface

The IBM Cognos PowerPlay Studio Explorer interface includes the following elements when one of the enhanced display types is selected.

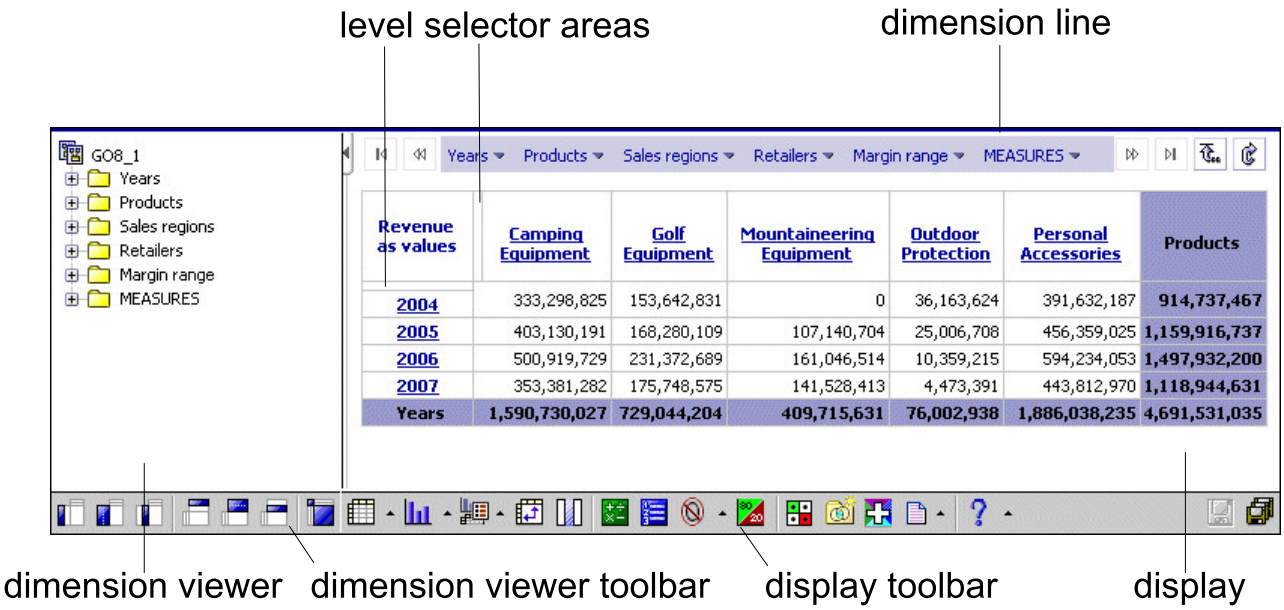


Figure 1. PowerPlay Studio interface

Display

In the display, you can right-click row headings, column headings, or data cells to perform actions that are associated with individual data elements.

Display Toolbar

Many of the controls in the enhanced display are available from menus or dialog boxes that you open from the display toolbar.

In this document, the display toolbar is referred to as the toolbar.

Dimension Viewer

The dimension viewer shows a full tree view of the dimensions and measures in a cube. This view helps you understand the data structure and find the items you require. In the dimension viewer, you see an organized view of all dimensions, levels, and categories in a selected cube.

In the dimension viewer, you can perform the following actions using drag and drop or right-clicking:

- change a row or column
- change a measure or add new measures to your report
- create a nested crosstab or chart
- filter

Dimension Viewer Toolbar

You can use the dimension viewer toolbar buttons to complete the same tasks as when you drag items from the dimension viewer.

To show the dimension viewer toolbar, right-click in the dimension viewer and click **Show Toolbar**.

If you use a supported browser other than Microsoft Internet Explorer,

- the dimension viewer toolbar is enabled by default.
- drag and drop actions are not supported. You must use the dimension viewer toolbar to complete tasks.

Dimension Line

You can use the dimension line to add categories to rows and columns, and filter the data in the cube. You can drag items from the dimension line to the crosstab or chart, or you can right-click the categories to view information about the data.

Level Selector Toolbar

To open the level selector toolbar, click the row or column level selector area. The toolbar contains buttons for expanding categories, deleting levels of data, swapping categories, changing levels, and viewing explanations.

Choose categories

To explore the categories from other dimensions, choose categories to replace the current categories or add nested categories to the report.

When you create a new report, the categories from the first two dimensions on the dimension line appear as the rows and columns. The modeler specifies the organization of dimensions when building the cube. Each dimension appears as a folder in the dimension viewer and on the dimension line of your report. For

example, the dimensions in a cube may include years, locations, products, and channels. The intersection of all the categories on the dimension line are calculated to give you the values for your report.

Categories appear as hyperlinks in the report. When you click a category, its child categories replace the categories in the report. When you click a summary category, the parent categories replace the child categories in the report.

You can also add any calculated categories that your administrator may have defined in a cube so you can analyze specific combinations of data.

Changing categories using the dimension line

To add categories using the dimension line, drag the category from the dimension line to the column heading area or the row heading area.

Changing categories using the dimension viewer toolbar

The dimension viewer toolbar provides several options for adding or changing categories.

Procedure

1. If the dimension viewer toolbar does not appear under the dimension viewer, right-click the area under the dimension viewer and click **Show Toolbar**.
2. In the dimension viewer, expand and click the level or category you want to appear as a row or column.
3. In the dimension viewer toolbar, choose where to add the category:
   - To add the selection as the outer level in nested rows, click the insert before the rows button  .
   - To replace the current rows, click the replace rows button  .
   - To add the selection as the nested level in rows, click the insert after the row button  .
   - To add the selection as the top level in nested columns, click the insert before the columns button  .
   - To replace the current columns, click the replace columns button  .
   - To add the selection as the nested level in columns, click the insert after the columns button  .

Choose Measures

A measure is a performance indicator that is quantifiable and used to determine how well a business is operating.

A measure may be

- a simple summary of available information such as number of units shipped, revenue, expenses, inventory levels, or quotas
- a calculated value such as revenue variance (forecast revenue minus actual revenue)

By default, the display uses the first measure in the list of measures.

Changing the measure using the dimension line

You can change the measure, or add multiple measures, from the dimension line.

Procedure

Choose to view one or more measures:

- To view one measure, drag the measure to the measure heading area.
- To view, in a crosstab, multiple measures from the same parent, drag each measure from the measures folder to a highlighted area between two column headings.

  You can use this method to reorder measures.
- To view all measures, in a crosstab, drag the Measures folder to the row heading area or the column heading area.

Changing the measure using the dimension viewer toolbar

You can change the measure from the dimension viewer toolbar.

Procedure

1. In the dimension viewer, click the measure in the Measures folder.
2. In the dimension viewer toolbar, click the replace measures button.

   If the dimension viewer toolbar does not appear under the dimension viewer, right-click under the dimension viewer and click **Show Toolbar**.

PDF Viewer

The IBM Cognos PowerPlay administrator sets the type of viewer used for PDF format reports, IBM Cognos Viewer or IBM Cognos PowerPlay Studio Report Viewer. Both viewers provide access to report options such as drill through and the ability to open the report in PowerPlay Studio. The default setting is IBM Cognos Viewer, which provides an interface that is consistent with the viewer used for viewing the PDF output from other IBM Cognos studios. The other viewer option, IBM Cognos PowerPlay Studio Report Viewer, has a similar appearance to IBM Cognos Series 7 PowerPlay Web Viewer.

Depending on the run options the report author selected when publishing the report, you can customize the information in the report. For example, the report author can provide prompt options that you can use to filter the report on a specific category or change the measure.

You can either print the information or open the report in PowerPlay Studio if you want to explore the report further.

Customize the Report Content

Depending on how the report was created, you may be able to customize the information in the report.

The choices that you can select may include

- dimensions
- row and column content
- zero suppression
- short headings
- currency and currency format

Procedure

1. Open a PowerPlay report in PDF format.
2. On the **Modify Report** page, select the information using the prompts and click **OK**.

   If the report is already open, you can return to the prompts using the **Change Report Settings** button  .

Results

If the prompts include dimensions, you can quickly remove all filters from all dimensions using the **Reset Dimensions** button  on the **Modify Report** page.

View Layers on Pages

Reports created in IBM Cognos PowerPlay Client may include different categories of information by using layers. When you view the PDF report in the report viewer, each layer appears on a separate page.

You can show layer views when you export the report in PDF format. As well, when enabled by your administrator, you can view explanations about each category in the report or drill through to a related report to reveal more information.

Procedure

Scroll to the next page in the report.

Results

The page appears showing the content for the next layer.

Explore Reports

If you want to further explore the data or change a report, you can open the report in IBM Cognos PowerPlay Studio Explorer.

Procedure

Do one of the following

- In IBM Cognos Viewer, click the PowerPlay Studio button  .
- In IBM Cognos PowerPlay Studio viewer, click the explore button  .

Managing Your Reports

After you create one or more reports, you can manage them for yourself and others. You perform the following tasks in IBM Cognos Connection:

- Schedule a report or a group of reports to run at a specific time.
- Distribute reports to other users.
- Print a report.
- Select the language used when a report is run.

- Set prompt values.
- Maintain the history of a report.
- Maintain different versions of a report.
- Create report views.

For information about how to perform these tasks, see the IBM Cognos Connection *User Guide*.

Chapter 2. Explore data

Use IBM Cognos PowerPlay to find specific categories or measures for your analysis, or to explore data by drilling down for more specific details or drilling up for a more general picture. You can also filter data to get the information you want. To further explore, you can nest child categories under a parent category or add calculations to show you the exact information you require. Drill through options may provide access to another cube, report, or data source.

Find specific dimensions or measures

You can search the current report or cube to find specific categories, dimensions, or measures in your data.

Using search to find specific items in highly complex and large dimensions can significantly speed up your analysis time. When you search the current report, IBM Cognos PowerPlay searches the data in the current display. When you search the cube, PowerPlay searches all the data in the cube.

The search results provide the category name and full path. For example, searching a cube for Star Lite shows the following results.

- Category: Star Lite
- Path: Products/Camping Equipment/Tents

Procedure

1. Click the arrow beside the help button and click **Find**.
2. Specify search criteria and click **Find**.
3. In the **Results** list, click the category that represents the items you wanted to find and choose one of the following options:
   - To isolate the data in a category in the current report, click the **Go To** link.
   - To filter the report on the returned category, click **Filter**.
   - To show the returned category in the report rows, click **Replace Rows**.
   - To show the returned category in the report columns, click **Replace Columns**.

Scenario Dimensions

A scenario dimension is a dimension in which categories represent different scenarios. For example, when analyzing financial data, you can analyze several sets of values at the same time, such as planned, budget, or actual values, or best and worst case values.

Unlike regular dimensions, scenario dimensions do not roll up to a single root category because the values would not be useful.

A scenario dimension is distinguished from other dimensions by the scenario dimension icon  . Scenario dimensions are defined by the Transformer modeler. If the modeler identified a default category for the scenario dimension, the default category appears as a default filter in the dimension line.

Drill Down and Drill Up

You can drill down and drill up to explore different aspects of your business and move between levels of information.

For example, you can examine revenue for an entire product line and then drill down to see revenue for each individual product in the line. When you finish viewing individual product revenue, you can drill back up. After you familiarize yourself with the hierarchy, you can drill down and drill up multiple levels at a time. If you want to examine the impact of a single aspect of your business on the whole, you can drill down to the lowest-level category in a dimension.

The available drill-down and drill-up features depend on the display type you choose.

Drill Down

Change the category levels using one of the following:

- To drill down to a lower-level category, in the dimension line, click the lower-level category.
- To drill down one category level at a time, click a row or column heading link until you reach the category level.
- To drill down one level across all categories, right-click the column or row level selector area, and click **Down a Level**.
- To drill down directly to the categories associated with a specific data value in crosstab displays, double-click the data value.

Drill Up

Change the category levels using one of the following:

- In the dimension line, click the higher-level category.
- To drill up one level across all categories, right-click the column or row level selector area, and click **Up a Level**.
- To drill up to parent row and column categories, double-click the data value where the totals for rows and columns intersect.

Different Paths to a Category

The IBM Cognos Transformer modeler can define multiple paths in a dimension that lead to the same categories. A primary drill-down path is the main path in a dimension. An alternate drill-down path is another path in the same dimension leading to the same categories.

For example, the main path of the years dimension is by year and one of its alternate paths is by month. Both of these paths converge at the day level.

Restricted Data Values

The IBM Cognos Transformer modeler can build security rules into cubes where data is sensitive, for example in financial applications. When the display shows a category level for which you do not have the correct security access, you see the word "denied" instead of a data value. When you drill down on a category, you cannot view a lower level of a restricted data value. The word "denied" also appears for summary totals of a category that include this restricted data value.

Filter Data

A filter changes the focus of a report by limiting information to a level of a dimension and emphasizing only the information you choose.

If you want to examine the impact of a single aspect of your business on the whole, you can filter to the lowest-level category in that dimension. For example, you start with a report that shows revenue in all regions for all product lines. Using the dimension line, you filter the report using the sales region dimension to show revenue for the Americas.

Procedure

In the dimension line, click the category you want to filter on.
Another option for filtering is to right-click the category in the dimension viewer and then click **Filter**.

To remove all filters from all dimensions, click the reset button  .

Nest Categories

When you open a report, the categories from the first two dimensions of the dimension line appear in the rows and columns.

To view more detail in the report, you can add nested categories from the current dimension, different dimensions, and measures. A nested report includes summary information for nested categories.

For example, a report shows Products categories in the columns and Years categories in the rows. You can add the quarters as nested categories. The summary for each quarter is shown in the following report.

Revenue as values		Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2006	2006 Q 1	115,969,290	58,379,261	36,539,206	2,410,113	131,722,288	**345,020,158**
	2006 Q 2	131,594,512	62,467,714	42,683,784	2,632,786	153,205,078	**392,583,874**
	2006 Q 3	130,979,047	56,040,116	41,443,786	2,621,541	147,252,623	**378,337,113**
	2006 Q 4	122,376,880	54,485,598	40,379,738	2,694,775	162,054,064	**381,991,055**
	2006	**500,919,729**	**231,372,689**	**161,046,514**	**10,359,215**	**594,234,053**	**1,497,932,200**
2007	2007 Q 1	145,539,940	81,537,354	59,768,436	1,879,174	184,020,708	**472,745,612**
	2007 Q 2	153,809,380	69,081,676	60,116,560	1,887,360	194,759,998	**479,654,974**
	2007 Q 3	54,031,962	25,129,545	21,643,417	706,857	65,032,264	**166,544,045**
	2007 Q 4	0	0	0	0	0	**0**
	2007	**353,381,282**	**175,748,575**	**141,528,413**	**4,473,391**	**443,812,970**	**1,118,944,631**
Years		**1,590,730,027**	**729,044,204**	**409,715,631**	**76,002,938**	**1,886,038,235**	**4,691,531,035**

Figure 2. Report with nested categories

Procedure

In the dimension line, locate the category you want to nest and add it to the row nest level area or the column nest level area. You can delete a nested category using the right-click menu available from the level selector area for the nested category.

Move or Copy Rows, Columns, and Nesting Levels

To quickly change the view of your crosstab data in the Enhanced interface, you can move or copy rows, columns, and nesting levels.

Procedure

Choose whether to move or copy a particular level:

- To move a level, drag the level selector area of the nested level to a target level area in the current axis or the other axis.
- To copy a level, press Ctrl and drag the level selector area of the nested level to a target level area in the current axis or the other axis.

  The target level area appears highlighted on the outer edge of an axis.

Results

You can delete a nested category using the right-click menu available from the level selector area for the nested category.

Related tasks:

"Show Multiple Measures in a Report" on page 42
You can show multiple measures in a report.

Create a Subset of Categories

You can define subsets of categories based on specified criteria. Subsets help you isolate, explore, and analyze specific elements of your data.

You can create subsets by search criteria, by measure value, or by individual category selection. You can also create a subset for a dimension directly from a crosstab. After you create the subset, it appears in the dimension viewer in the dimension you used to create the subset.

Subsets can be dynamic, meaning that they are updated whenever a change in the cube data affects the categories in the subset. For example, you are a regional manager for a company that sells outdoor products. To analyze the sales in your region of the products that are environmentally-friendly, you create a subset defined by search criteria that all products contain the text "Enviro." As more products are added to the cube that meet the search criteria, they are added to the subset dynamically.

If you create a subset by individual category selection, it can contain categories from multiple levels, but only categories in the same dimension. You cannot nest a subset within the dimension from which it was derived or within another subset if both subsets are from the same dimension.

When you drill through from a report that uses a subset, subset values are not applied to the target report.

Creating a subset using search criteria or measure value

You can create a subset using search criteria or a measure value.

Procedure

1. Click the custom subsets button  .
2. Type a name for the subset.
3. Select the dimension on which to create the subset.
4. Define the search criteria or measure value:
   - To define search criteria, click **Define Rule by Search Criteria**, **Next**. Click **Add** and create the search definition by providing the search string, starting category to search, and scope of category levels. Click **OK**.

     The search string is not case sensitive.

     You can define more than one search definition. You can also edit and delete existing definitions in the **Create Custom Subset by Name Search** dialog box.

     When you finish defining the search definitions, click **Next**.
   - To define a measure value, click **Define Rule by Measure Value**, **Next**. Define the measure value by choosing the measure on which you want to base the rule, values you want returned, category, and scope of category levels you want to search. You can also apply dimension filters, if appropriate. When you finish defining the measure value, click **Next**.
5. Review the search results.

   To remove a search result from the subset, click the result and click **Remove**. To return the search result to the subset, click the result and click **Re-enable**.

   Categories that are returned in the result set based on the subset rule are dynamic. If there are changes in the data source, the returned result set reflects those changes, and they are identified by a binocular icon  .
6. If you want to add categories that were not returned in the result set, in the **Available Categories** list, select the categories and click the add to custom subset button.

   These categories are static. If you modify the subset rule or if there are changes in the data source and a different result set is returned, these additional categories are still included in the subset and remain until you delete them.
7. Click **Finish**.

Results

In the dimension viewer, the subset appears as a new category.

You can rename, edit, or delete the subset using commands on the right-click menu when you select the subset.

Creating a subset using a category selection

You can create a subset using a category selection.

Procedure

1. Click the custom subsets button  .
2. Type a name for the subset.

3. Select the dimension on which you want to create the subset.
4. Click **Select Categories**, **Next**.
5. Select the categories you want to appear in the subset and click the add to custom subset button.
6. Click **Finish**.

Results

In the dimension viewer, the subset appears as a new category. The categories are static and remain in the subset until you delete them.

You can rename, edit, or delete the subset using commands on the right-click menu when you select the subset.

Creating a subset using a dimension in the report

You can create a subset using a dimension in the report.

Procedure

1. Select rows or columns you want to include in the subset.
2. Right-click in the heading area of a selected row or column and click **Create Custom Subset**.

Results

You can rename, edit, or delete the subset using commands on the right-click menu when you select the subset.

Creating Subsets with Top and Bottom Categories

You can create subsets that include categories with either the highest or lowest values of a specific measure.

Users can dynamically select the number of categories to include in the subset, such as the top 10 or the bottom 25.

Procedure

1. Click the custom subsets button  .
2. Type a name for the subset, choose the dimension to be used as the basis for the subset, click **Define Rule by Measure Value**, **Next**.
3. Set options as follows and click **Next**:
   - Click the option to include values by top (sorted in descending order) or bottom (sorted in ascending order).
   - Type the number of categories to include in the subset definition.
   - Select the required dimension level as the starting point for the subset definition and select an appropriate scoping option.
4. Continue to follow the wizard to the last pane and click **Finish**.
5. Confirm that the dimension tree is updated to contain your new subset, with the filtered levels changed accordingly.

Create a Copy of a Subset

You can create a copy of a static subset. After you create the copy, you can modify it to suit your needs. For example, you can use copies to create several similar subsets.

Before you begin

You must use the enhanced interface to create a copy of a static subset.

Procedure

In the dimension viewer, right-click a subset and click **Duplicate**.

Results

A copy of the subset is created with the name **Duplicate of** ***original subset name*** .

You can select the copy and edit it using the **Edit** command from the right-click menu.

Add or Remove Categories in a Subset

You can add categories to a subset if they are from the same dimension as the subset and from the same hierarchy from which the subset was initially created. Also, the category cannot be a hierarchy root.

Adding categories to a subset

You can edit a subset to add categories.

Procedure

1. In the dimension viewer, right-click a subset, click **Edit**.
2. In the **Available Categories** list, select the categories you want to appear in the subset.
3. In the **Result Set** list, select a category.

   The added categories will appear above the category you select in the **Result Set** list.
4. Click the add to custom subset button to move the categories from the **Available Categories** list to the **Result Set** list.
5. Click **Finish**.

Results

The categories are added to the subset.

Removing categories from a subset

You can edit a subset to remove categories.

Procedure

1. In the dimension viewer, right-click a subset, click **Edit**.
2. In the **Result Set** list, select a category.
3. Click the remove from custom subset button to move the categories from the **Result Set** list to the **Available Categories** list.

4. Click **Finish**.

Results

The categories are removed from the subset.

View Details of a Subset Definition

If a dimension filter or a crosstab row or column contains a subset, the **Explain** window shows a concise description of the subset definition, next to an identifiable icon.

For example, instead of just the subset name, categories that are included in the subset are listed in the form of searchable strings, ranges, or contains expressions. Starting point and scope may also be shown.

The following does not appear in the **Explain** window:

- categories in a static pick list
- explicitly included categories or categories with discarded results
- in subsets by measure, the top (root) level of a dimension.

Procedure

1. Right-click a row, column, or cell in the crosstab and click **Explain**.
2. Scroll as necessary, and observe the detailed description of your subset.

Hide Totals or Subtotals

Each report using a crosstab display shows a row and column with the total value of each category. Similarly, when you add nested categories to a report using a crosstab display, IBM Cognos PowerPlay adds a subtotal summary row or column for each level of child categories so that you can see how each level of categories rolls up to the next level.

If you do not want to see totals or subtotals, you can hide them.

Before you begin

The report must use the crosstab or indented crosstab display to hide totals or subtotals.

Procedure

1. Right-click one total or subtotal summary row or one total or subtotal summary column, and click **Hide/Show**.
2. Clear the **Show Summaries** check box and click **OK**.

Add Calculations

You can create a custom calculation that combines rows or columns to obtain a new item.

You can perform the following types of calculations:

- Arithmetic: add, subtract, multiply, divide, exponentiate
- Percentage: percent, percent of base, cumulative percent, percent growth

- Analytic: average, median, maximum, minimum, percentile, rollup
- Financial: forecast, accumulate

For example, if your report shows quarters for the year, you can add new items showing the cumulative percentage that each quarter contributes. After a new calculated category is added, you can add other calculations using an existing calculated category.

Procedure

1. Select the row headings or column headings for which you want to perform a calculation and click the calculation button  .
2. In the **Operation Type** box, select the type of calculation.
3. In the **Operation** box, select the calculation.
4. In the **Calculation Name** box, type a name for the calculation.
5. In the **Includes Categories** box, select the categories you want to include in the calculation.

   Decide whether you want to include or exclude zero-suppressed categories in your calculation. Suppressing zero values while still including them in your calculation may confuse other consumers of your report.
6. If you want to use a constant in the calculation, select the check box beside **Number** and type the constant.
7. If you want to move the calculation, select the **Movable** check box.
8. Click **OK**.

Results

The new calculated category appears in italicized text in the display.

Related tasks:

"Move Calculations"
You can drag calculations to any location on an axis, using the Enhanced interface.

Edit Calculations

You can edit calculations that you inserted as columns or rows in a report. You can also change the name of calculations.

For example, you created calculations for the cumulative percentage that sales for each quarter contribute to the year. You can change the calculation to show the contribution for each month if you want more specific details for your report.

In the Generic interface, you cannot modify an existing calculation. You must first delete the calculation and then re-create it with its new definition.

Procedure

1. Right-click the calculation row heading or the calculation column heading, and click **Edit Calculation**.
2. Edit the items in the calculation and click **OK**.

Move Calculations

You can drag calculations to any location on an axis, using the Enhanced interface.

You can also position the calculation at the top or on the left of the crosstab. When calculations are moved, they remain fixed in the position that you specify as long as you continue exploring within the same dimension in the crosstab.

If you move a calculation under a category that is not a parent of the operands for the calculation, the operand values are set to zero. For example, if you move the calculation Camping Equipment +1 under a category that is not a parent of Camping Equipment, the calculation produces the value 1 for all rows. This is because the value of Camping Equipment is set to 0. The operand is also set to 0 when you set the dimension bar filter to a category that is not a direct ancestor of the operands of the calculation.

You can move calculations in a time dimension, but not in a time category.

The following restrictions apply when dragging calculations in a crosstab:

- Calculations must be specified as moveable.
- Calculations can be moved only within the same dimension.
- Forecast calculations and ranks cannot be moved.

Before you begin

By default, calculations are not moveable unless a setting is enabled when the calculation is created.

Procedure

1. Right-click the calculation row heading or the calculation column heading, and click **Edit Calculation**.
2. In the **Calculations** dialog box, click **Moveable** and click **OK**.
3. Click the calculation and drag it to the new location in the report.

Results

If the crosstab changes, the movable calculation moves relative to the category to which it is related. It remains next to this category as long as the category is visible in the crosstab and the hierarchy of the dimension remains the same. Unlike a non-movable calculation, the calculation does not change locations when the definition of the calculation changes.

Forecasting Methods

TERMS OF USE: The forecasting methods used in the Forecasting Function are based on the statistical analysis of historical information drawn from underlying data sources. The accuracy of the forecasted values is subject to many variables. These variables include the accuracy of the underlying historical data and external events which could affect the validity of that underlying historical data for forecasting purposes. The Forecasting Function is to be used only as a guide of the future values for the measures being forecasted and is not intended to be used as the basis for complex financial or business decisions.

IBM makes no representations as to the accuracy of the actual future values and does not guarantee any specific results. You use the Forecasting Function and the data it generates at your own risk. The Forecasting Function may contain errors or produce inaccurate calculations. You accept the Forecasting Function and the documentation "AS IS". IN NO EVENT SHALL IBM BE LIABLE FOR DAMAGES

OF ANY KIND INCLUDING, WITHOUT LIMITATION, DIRECT, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF THE FORECASTING FUNCTION OR THE INTERPRETATION OF THE DATA RESULTING THEREFROM.

Related concepts:

Chapter 5, "Forecast Formulas," on page 51
You can make predictions about the future performance of your business based on past data by using one of these time series forecasting methods: Trend, Growth, or Autoregression.

Trend (Linear or Straight Line)

The trend forecasting method is based on the linear regression technique of time series forecasting. Trend forecasting gives the best forecasting reliability when the driving factors of your business affect your measures in a linear fashion. For example, when your historic revenue increases or decreases at a constant rate, you are seeing a linear effect.

A multiline plot of historic data should look linear or close to linear for greatest reliability. For example, if you are forecasting revenue for the next two quarters based on revenue for the past four quarters, and if the multiline plot of past quarterly revenue is linear or close to linear, then the Trend method gives you the best forecasting reliability.

Use the Trend forecasting method when only two data values represent two time periods in your historic data.

Growth (Curved or Curved Line)

The Growth forecasting method is based on the exponential regression technique of time series forecasting. Growth forecasting gives you the best forecasting reliability when the driving factors of your business affect your measures exponentially. For example, when your historic revenue increases or decreases at an increasingly higher rate, you are seeing an exponential effect.

A multi-line plot of historic data should look exponential for best accuracy. For example, if your revenues are growing exponentially due to the introduction of a best selling product, then Growth forecasting provide a more reliable forecast than the Trend method. Similarly, if you hire two additional sales representatives for your company, you can use Growth forecasting to determine which product line has the greatest growth potential to allocate your new resources effectively.

Autoregression (Seasonal)

The autoregression forecasting method is based on the auto-correlational approach to time series forecasting. Autoregression forecasting detects the linear, nonlinear, and seasonal fluctuations in historic data and projects these trends into the future. Autoregression provides the best forecasting reliability when the driving factors underlying your business are affected by seasonal fluctuations.

A multiline plot of time and revenue will show up-and-down fluctuations that may reflect seasonal variations. For example, if your revenues are growing exponentially due to the introduction of a best selling product, but sales of that product are also seasonal, then autoregression forecasting provides a more reliable forecast than the Growth method.

Use the autoregression method when you have historic data representing a large number of time periods (for example, more than 24 monthly periods) and when seasonal variations may occur in it.

For crosstabs, if you nest multiple levels of time, IBM Cognos PowerPlay produces the forecast only at the highest level of time. For example, if you nest quarters within years for revenue and then insert a forecast calculation, PowerPlay generates the forecast only at the years level. To generate your forecast at the quarters level, delete the years level before you generate the forecast.

If you applied ranking in your crosstab, PowerPlay creates the forecast you request, however, forecasts are not included in the rankings.

If you convert the currency in your crosstab, PowerPlay creates the forecast on the currency-converted values.

Create a Forecast

You can make predictions about the future performance of your business based on past data by using one of these time series forecasting methods: trend, growth, or autoregression.

Calculated values can appear as *na*, or in scientific notation (for example, 1.7976931348623158e+308). If the values appear as *na*, IBM Cognos PowerPlay does not have appropriate values on which to base a forecast. If the value appears in scientific notation, the result is larger than 15 digits.

Procedure

1. Right-click a time category in your crosstab display or graphic display, and then click **Insert Calculation**.
2. In the **Operation type** box, select **Financial**.
3. From the **Forecast Method** list, select the forecasting method you want to use.
4. In the **Forecast Horizon** box, type the number of time periods to forecast.
5. Click **OK**.

Results

Tips

- To change the label of a calculation, right-click the label and click **Rename Calculation**. Type the new label in the **Calculation Name** box and click **OK**
- To see the forecasting method that was used, right-click the label, and click **Explain**.

Work in Design Mode

When you work with crosstab displays, you can create your report without showing the data.

This can save you time if you are exploring a large cube with many levels. When you find the information you are interested in, you can quickly show the data in the display.

Some of the options on the toolbar are unavailable while **Get Data Later** is enabled.

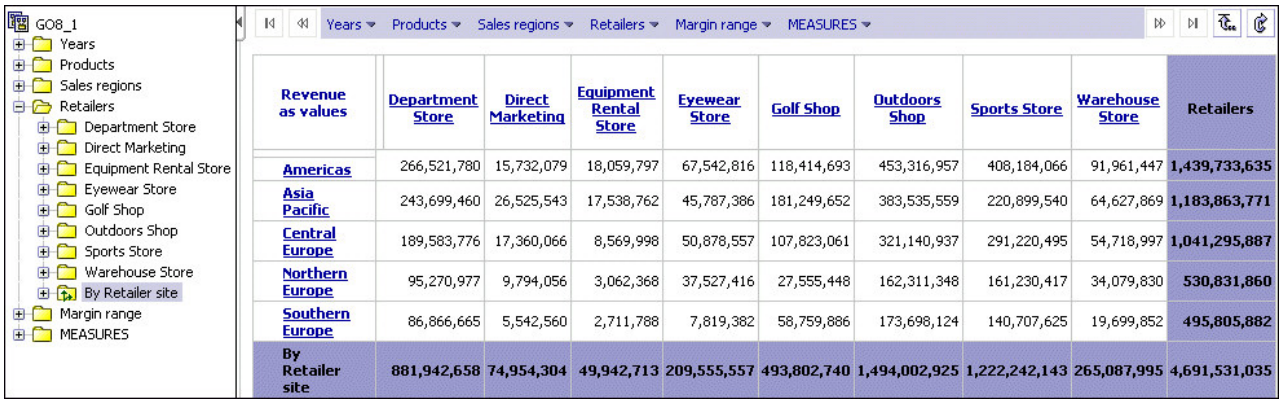
Procedure

1. Click the display options button  and click **Get Data Later**.
2. Explore the report until you are satisfied with its current state.
3. In the display, click **Get Data**.

Analyzing Alternate Hierarchies

You can create crosstabs that show two different hierarchies of the same dimension in the rows and columns. Do this to isolate and analyze relative data at a fine level of granularity.

For example, you create a report that includes information on retailer types. The Retailers dimension in your report includes categories for each type of retailer, and an alternate hierarchy category that represents the vendors by region. Individual retailers are the lowest level in the Retailers dimension. In the alternate hierarchy, individual vendors are also the lowest level. When you create a crosstab that has the alternate hierarchy by retailer site in the rows and retailer type in the columns, you can quickly analyze the relative performance of the retailer type in the different regions.



Revenue as values	Department Store	Direct Marketing	Equipment Rental Store	Eyewear Store	Golf Shop	Outdoors Shop	Sports Store	Warehouse Store	Retailers
Americas	266,521,780	15,732,079	18,059,797	67,542,816	118,414,693	453,316,957	408,184,066	91,961,447	**1,439,733,635**
Asia Pacific	243,699,460	26,525,543	17,538,762	45,787,386	181,249,652	383,535,559	220,899,540	64,627,869	**1,183,863,771**
Central Europe	189,583,776	17,360,066	8,569,998	50,878,557	107,823,061	321,140,937	291,220,495	54,718,997	**1,041,295,887**
Northern Europe	95,270,977	9,794,056	3,062,368	37,527,416	27,555,448	162,311,348	161,230,417	34,079,830	**530,831,860**
Southern Europe	86,866,665	5,542,560	2,711,788	7,819,382	58,759,886	173,698,124	140,707,625	19,699,852	**495,805,882**
By Retailer site	**881,942,658**	**74,954,304**	**49,942,713**	**209,555,557**	**493,802,740**	**1,494,002,925**	**1,222,242,143**	**265,087,995**	**4,691,531,035**

Figure 3. Report with alternate hierarchy

Procedure

1. In the dimension viewer, right-click the dimension category you want to filter on and click **Replace Rows**.
2. Right-click the alternate hierarchy category in the dimension and click **Replace Columns**.

Results

The column headings and values change to reflect the addition of the alternate hierarchy filter.

View a Chart and Table Together

You can improve your presentation and analytical capabilities by viewing a crosstab and a chart together in one browser window.

In the split view, both displays use the same data and remain synchronized if you drill or filter in one view. You can save split views with PDF exports and bookmarks created in IBM Cognos PowerPlay. You can also save split views by publishing your report to the portal.

Procedure

1. Click the display options button  .
2. From the **Display Options** menu, click **Split View**.

Results

By default, a bar chart and a crosstab appear. You can use the crosstab and chart flyout menus on the toolbar to change the crosstab or the chart display.

View Explanations

You can see an explanation of the information you are exploring. The explanation contains general information about the status of the current display and any descriptions of the data that the Transformer modeler has added to the cube.

In IBM Cognos PowerPlay Studio Viewer, explanations are available for the row and column headings in the report. In PowerPlay Studio Explorer, explanations provide additional information including details about suppression settings and whether the report includes custom exceptions.

Viewing explanations in PowerPlay Studio Explorer

Choose whether to view explanations for the entire display or for individual cells:

- To view explanations for the entire display, click the arrow to the right of the help button and click **Explain**.
- To view explanations for individual cells in the display, right-click the cell and click **Explain**.

Viewing explanations in PowerPlay Studio Viewer

In Adobe Acrobat Reader, pause the pointer over the row heading or column heading that you want an explanation for and click the heading.

Drill Through From and To PowerPlay Studio

You can go to an IBM Cognos Business Intelligence report or to a package that contains a PowerCube from PowerPlay Studio using drill-through definitions in IBM Cognos BI.

You can also drill through to a package that contains a PowerCube from another report, or another PowerCube package. For information about drilling through between other studios in IBM Cognos BI, see the IBM Cognos Connection *User Guide*.

The following sample reports in the **Sales and Marketing (cube)** package show drill-through links from PowerPlay Studio:

- **Profit Margin and Revenue**
- **Revenue by Order Method**

- **Top 20 Product Brands**

You can use the context from the cell that is selected and the filters in the dimension line in the source report in PowerPlay Studio to

- filter and open an existing report or the default view of a PowerCube in PowerPlay Studio
- filter and open a report in Analysis Studio
- filter and run a report created in Query Studio, Analysis Studio, or Report Studio
- go to a bookmark in a saved version of a report

The context is not used as a filter when the definition states that the whole report runs or when you drill through to

- a saved version of a report
- a report that is being run, when you have not selected any relevant context in the source report

Depending on the default prompt settings in the target report and in the drill-through definition, any prompts that do not receive values from the context of the source report may appear.

Note: In IBM Cognos Series 7 PowerPlay, the drill-through icon is not available if no drill-through targets have been defined and is in scope. In PowerPlay Studio, as in the other IBM Cognos BI tools, the drill-through icon is always available, but the list of targets is empty if no drill-through target is defined or is in scope. If the PowerPlay administrator disables the drill-through option, the icon does not appear.

Procedure

1. Open a report or the default view of a PowerCube in PowerPlay Studio.
2. Select the data that you want to drill through on.
3. Click the **Drill Through** button  .

   If only one drill-through target is defined, then the target opens. Otherwise, the **Go To** page appears.
4. From the list of possible targets, click the name of the drill-through definition for the target report or PowerCube package.

   Tip: If you have the necessary permissions, you may be able to check that you are running with the correct context before you open the target. In the **Go To** page, click **View passed source values**.
5. If necessary, select values for prompts for the target report.

   The target opens.

Chapter 3. Formatting Data

IBM Cognos PowerPlay includes many formatting options that you can use to make your reports more effective. For example, you can change from a crosstab display to a graphical display such as a pie chart or line chart. Graphical displays highlight general trends or relationships in the data. Custom exception rules emphasize exceptional data so you can quickly identify areas of success and areas that require more investigation. Other formatting options include changing colors and patterns, ranking data, and hiding specific categories.

Display Types

A display is a visual representation of the report data. You can change displays to

- show information from different perspectives
- find a trend
- compare variables, show variance, and track performance
- compare multiple measures

For example, you can change a crosstab display to a pie display to view the relationship of individual components of your data to the entire data set. Also, you can use more than one display type in the same report.

When you view nested categories in graphic display types, each lowest-level intersection is shown in a separate display. To isolate the display for a nested category, click the link for the nested category. If there are no nested categories, only one display is shown.

To view summary information in a nested chart, click the zoom in button  .

Tip: To return to the original view of the report, click the display options button and click **Reset**. If you prepared a bookmark, you do not return to the initial view.

Crosstab Display

The standard crosstab display is the default display type, and it shows data in tabular format. The first two dimensions of the cube represent the rows and columns.

If you nest categories, the nested categories appear in rows below or columns to the right of the top level dimensions. In this report, the Quarters level is nested in the Years level.

Revenue as values		Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2006	2006 Q 1	115,969,290	58,379,261	36,539,206	2,410,113	131,722,288	**345,020,158**
	2006 Q 2	131,594,512	62,467,714	42,683,784	2,632,786	153,205,078	**392,583,874**
	2006 Q 3	130,979,047	56,040,116	41,443,786	2,621,541	147,252,623	**378,337,113**
	2006 Q 4	122,376,880	54,485,598	40,379,738	2,694,775	162,054,064	**381,991,055**
	2006	**500,919,729**	**231,372,689**	**161,046,514**	**10,359,215**	**594,234,053**	**1,497,932,200**
2007	2007 Q 1	145,539,940	81,537,354	59,768,436	1,879,174	184,020,708	**472,745,612**
	2007 Q 2	153,809,380	69,081,676	60,116,560	1,887,360	194,759,998	**479,654,974**
	2007 Q 3	54,031,962	25,129,545	21,643,417	706,857	65,032,264	**166,544,045**
	2007 Q 4	0	0	0	0	0	**0**
	2007	**353,381,282**	**175,748,575**	**141,528,413**	**4,473,391**	**443,812,970**	**1,118,944,631**
Years		**1,590,730,027**	**729,044,204**	**409,715,631**	**76,002,938**	**1,886,038,235**	**4,691,531,035**

Figure 4. Standard crosstab display with nested categories

Indented Crosstab Display

Use indented crosstabs so that the levels of nested categories are indented and the relationships between the categories are more easily identified. This display also presents a more compact format than a crosstab, making it better for printing.

Revenue as values	Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2006						
2006 Q 1	115,969,290	58,379,261	36,539,206	2,410,113	131,722,288	**345,020,158**
2006 Q 2	131,594,512	62,467,714	42,683,784	2,632,786	153,205,078	**392,583,874**
2006 Q 3	130,979,047	56,040,116	41,443,786	2,621,541	147,252,623	**378,337,113**
2006 Q 4	122,376,880	54,485,598	40,379,738	2,694,775	162,054,064	**381,991,055**
2006	**500,919,729**	**231,372,689**	**161,046,514**	**10,359,215**	**594,234,053**	**1,497,932,200**
2007						
2007 Q 1	145,539,940	81,537,354	59,768,436	1,879,174	184,020,708	**472,745,612**
2007 Q 2	153,809,380	69,081,676	60,116,560	1,887,360	194,759,998	**479,654,974**
2007 Q 3	54,031,962	25,129,545	21,643,417	706,857	65,032,264	**166,544,045**
2007 Q 4	0	0	0	0	0	**0**
2007	**353,381,282**	**175,748,575**	**141,528,413**	**4,473,391**	**443,812,970**	**1,118,944,631**
Years	**1,590,730,027**	**729,044,204**	**409,715,631**	**76,002,938**	**1,886,038,235**	**4,691,531,035**

Figure 5. Indented crosstab display with nested categories

Pie Display

The pie display charts the summary row of each column to show its proportional contribution to the whole. Any negative numbers are treated as absolute values. For example, the values -50 and 50 are plotted as 50. This type of display is useful for situations where there are not too many items.

Categories whose values are less than 10% of the total display are grouped in a slice labeled **Other**. The **Other** slice also contains any categories with 80/20 suppression, whose value is less than 20% of the total display.

If the display does not have nested categories, a legend identifies the column and data value associated with each colored section of the pie.

Simple Bar Display

The simple bar display charts the summary row of each column to show absolute contribution. Use this display type to show change over a specific time period, contrast two or more variables, and reveal trends in a clear format. This type of display is useful for discrete data.

Clustered Bar Display

The clustered bar display plots the cell values of a crosstab in groups so that you can easily compare related information, summaries, and categories. One bar group is created for each column. Each bar in a group represents the row value.

If the display does not have nested categories, a legend identifies the row or column represented by each color.

Stacked Bar Display

The stacked bar display shows trends across columns by plotting the relative proportions of parts to the whole and the relationship between the parts. One bar is created for each column. Within a bar, a segment represents the row value.

If the display does not have nested categories, a legend identifies the row or column represented by each color.

Simple Line Display

Similar to a simple bar display, the simple line display charts the summary row of each column to show absolute contribution.

Use this display type to show change over a specific time period, contrast two or more variables, or reveal trends in a clear format. The simple line display is useful for discrete data.

Multiline Display

The multiline display shows trends across columns by plotting the cell values of a crosstab in a line chart.

One line is created for each column, with a segment of the line representing each row value. Use this display type to reveal and compare trends and cycles that show relationships between variables, or to show time series analysis and relationships between variables.

If the display does not have nested categories, a legend identifies the row or column represented by each color.

3D Bar Display

The 3D bar display shows trends across columns by plotting the cell values of a crosstab in a three-dimensional bar.

One bar is created for each column, with the top of the bar representing each row value. Use this display type to show relationships between two or more variables to analyze large quantities of data that are difficult to interpret otherwise, or to provide a different perspective on the data.

If the display does not have nested categories, a legend identifies the row or column represented by each color.

Scatter Display

A scatter display shows the first measure on the Y-axis and the second measure on the X-axis.

Correlation Display

A correlation display compares two measures in the same cube.

The first measure in the cube appears as bars and the second measure appears as lines. By default, IBM Cognos PowerPlay uses the first two measures in the cube for the display. However, you can change the measures that are compared.

Changing or modifying a display

A standard crosstab is the default display for new reports. You can select a different display type and then modify the display for a more effective presentation of your data.

Selecting a display

Complete the following step to change the display type.

Procedure

Do one of the following:

- To select a chart display, click the arrow to the right of the chart button, and click a chart type.
- To select a crosstab display, click the arrow to the right of the crosstab button and click a crosstab type.

Modifying a chart display

Complete the following steps to customize a chart display.

Procedure

1. Click the arrow to the right of the chart button, and click **Chart Options**.

   Note: Some of the following chart options may not be available for your chart type. For example, the **Scale** tab does not appear for pie charts.
2. Click the **General** tab, and select the options that you want.
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.
4. Click the **Statistical** tab to format statistical lines.
5. Click the **Palette** tab to modify the pattern or color of bars.
6. Click the **Background** tab to apply a color, pattern, or gradient to the background of the display.
7. Click the **Labels** tab to specify titles.
8. Click **OK**.

Related tasks:

"Format Legends" on page 39
You can use either an HTML legend, or an embedded legend.

"Modify the Y-Axis" on page 38
You can change some properties of the Y-axis.

"Show Statistical Lines"
You can use statistical lines to indicate minimum, maximum, mean, standard deviation, logarithmic regression, linear regression, or custom values.

"Change the Patterns and Colors in a Display" on page 43
To help highlight different categories in bar and pie displays, you can specify colors, patterns, or gradients for each series of bars or pie slices.

"Apply a Background Color" on page 44
You can apply a color, pattern, or gradient to the background of the display. When you apply a gradient to the background, you can set the direction of the gradient.

"Format Labels" on page 44
You can customize the labels used in a chart display. For example you can create a custom chart title and format font properties.

Changing a measure used in a correlation display

Complete the following step to change the measure used in a correlation display.

Procedure

From the dimension line, select a different measure.
If both measures do not appear in the dimension line, use the scroll options to show the hidden part of the dimension line.

Show Report Values as Percentages

You can show report values as a percentage of the row or column subtotals or of the report total.

Examining a dimension as a percentage can provide new insights into your business data. For example, you have Products in the rows of your report and show the revenue values for each product as a percentage of all rows. You can see which products contributed the most to total product revenue.

Procedure

Click the display options button and click **Display Options**.
In the **Display Measures** box, select a percentage data format and click **OK**.

Show Statistical Lines

You can use statistical lines to indicate minimum, maximum, mean, standard deviation, logarithmic regression, linear regression, or custom values.

Statistical lines are series-based. When applying a statistical line to a chart with multiple series, you must specify the series to which the statistical line applies. You can specify the line type and the color of each statistical line independently. You can set statistical lines on all displays, except 3D bar and pie displays. You cannot use standard deviation or logarithmic regression lines in a scatter display.

Procedure

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Statistical** tab.
3. Select the type of statistical line to use in the display and set the line properties.

   If you are defining statistical lines for more than one display, indicate the series to which each statistical line applies.
4. Click **OK**.

Convert Currency Values

You can convert the monetary values in your report into a different currency.

For example, you can convert your report values from Canadian dollars to euros. You can select any currency that your Transformer modeler has set up in the cube. The Transformer modeler also defines the default format for each currency.

When you format a currency value, the currency symbol can be specified separately from the format. This means that your browser locale settings can be used to format the number (for example, the decimal and group separators) while still preserving the currency representation.

Procedure

1. Click the display options button and click **Display Options**.
2. In the **Currency** box, select the currency you want.

   If no currencies are available, none were defined in the cube.

Results

If you use a currency other than the default currency defined in the cube, the currency name appears in the display.

Custom Exception Highlighting

You can emphasize specific data by defining custom exception highlighting rules.

You define custom exceptions as part of a report. IBM Cognos PowerPlay stores these definitions so that each time you open a crosstab view of this report, the exceptions are available. Exception highlighting must be applied by the report user. You can define up to 20 custom exceptions, each with up to five value ranges.

Define a Custom Exception

You define a custom exception so that data that falls within a value range appears in a crosstab view with the defined formatting.

For example, you can define a custom exception to show sales that are below target with a red background.

A custom exception can contain up to five value ranges, with formatting attached to each range. For each value range there is a minimum value, a maximum value, a font color and a background color.

Procedure

1. Click the custom exception highlighting button  .
2. In the **Exceptions** dialog box, click **Add**.
3. Type an exception name.
4. In the **From** box, enter a minimum value for the first range or click **Minimum** to have no lower boundary.
5. In the **To** box, enter a maximum value for the first range or click **Maximum** to have no upper boundary.
6. Select formatting options for the range.
7. Define additional value ranges if required.
8. Click **OK**.

Results

The new definition appears in the **Defined Exceptions** list. You must apply the exception before the highlighting appears in the report.

You can edit or delete definitions from the **Defined Exceptions** list.

Apply a Custom Exception

You must apply a defined custom exception before the highlighting appears in the report. IBM Cognos PowerPlay can show only one custom exception definition for a particular cell at a time. When you apply an exception to a column, a row, or to the whole report, this application removes any exception that was previously applied to the same selection.

Where a cell lies at an intersection between two defined custom exceptions, only the most recently applied exception will be visible for that cell.

PowerPlay shows custom exceptions in crosstab view only. You can define custom exceptions in any view, but PowerPlay ignores them.

Custom exceptions apply to all cell types, including calculations, calculated categories, and measures.

You can apply one custom exception to a summary category and a different exception to its children. Apply the exception definition you want for the children to the summary total, expand the summary to show the children, and then apply the exception you want to the summary total only.

Before you can apply a custom exception, it must already be defined.

Applying a custom exception

To apply a custom exception, complete the following steps.

Procedure

1. Click the custom exception highlighting button  .
2. Select a row, column, or measure in the crosstab.

   Tip: To select the entire crosstab, click the Measure cell in the crosstab. To clear the selection of the entire crosstab, click the Measure cell again.

3. From the **Defined Exceptions** list, click the custom exception you want to apply and click **Apply**.
4. Click **OK**.

Removing custom exception highlighting

To remove custom exception highlighting, complete the following steps.

Procedure

1. Click the category where the custom exception is applied.
2. Select **(none)** from the **Defined Exceptions** list.
3. Click **OK**.

Highlight Exceptions Automatically

IBM Cognos PowerPlay can automatically highlight exceptional values within new data. Exceptions stand out in a report or crosstab and call attention to their values.

PowerPlay considers a value exceptional if it is significantly higher or lower than the value expected compared to its row and column totals. By default, automatic highlighting shows low values in a bold red font and high values in a bold green font.

Before you begin

In the Enhanced interface, the exception highlighting button is not on the PowerPlay toolbar by default. To add the exception highlighting button to the PowerPlay toolbar, contact your administrator.

Procedure

Click the automatic exception highlighting button.

Sort Values

In crosstab displays, you can sort the row and column values in ascending or descending order.

For example, a report shows the product sales for the previous ten years. You sort the sales figures to order them from the highest figure to the lowest figure. The data remains sorted until you drill down or drill up.

Procedure

1. Select the row or column in which you want to sort the values.

   The row or column becomes highlighted, and the sort button  appears in the row or column heading.
2. Click the sort button, and choose to sort by ascending or descending order.

Results

The values and the sort icon change to show the type of sort action that you applied to the row or column. To remove value sorting, click the sort button, and click **No Sort**.

Swap Rows and Columns

You can exchange the positions of categories in rows and columns.

For example, a report contains few rows but many columns that exceed the width of the printed page. You swap the rows and columns to fit the report on one page. You can exchange the positions of categories within a nested crosstab. For example, you have Products nested within Years but you exchange the positions to see Years nested within Products.

In addition to the toolbar and right-click menu controls described below, you can drag and drop rows and columns to swap them.

Procedure

Do one of the following:

- To swap rows and columns, click the swap button  .
- To sway nested levels, right-click the level selector area for the nested category, and choose how you want to swap the nested levels.

  The positions of the parent category and the nested category are exchanged.

Limit the Size of Crosstabs

To improve the performance and readability of large reports, you can limit the data that appears in crosstab displays.

For example, you set a row limit of 20 and a column limit of 10. Values that you set in IBM Cognos PowerPlay for the rows and columns override the default row and column limits set by your PowerPlay administrator.

When you limit the size of a crosstab, PowerPlay provides the following navigation buttons in the display.

Table 1. Crosstab navigation controls

Button	Description
	Moves to the next page of columns.
	Moves to the previous page of columns.
	Moves to the first page of columns.
	Moves to the last page of columns.
	Moves to the next page of rows.
	Moves to the previous page of rows.
	Moves to the first page of rows.

Table 1. Crosstab navigation controls (continued)

Button	Description
	Moves to the last page of rows.

When you limit the number of rows or columns in a report with nested categories, you must choose the number of categories you want to show at the lowest level. Subtotal categories are always included on each page (unless Hide Subtotals is enabled), even if the limit must be exceeded to do so.

Procedure

1. Click the display options button  .
2. Click **Display Options**.
3. Select the number of rows you want to show.
4. Select the number of columns you want to show.
5. Click **OK**.

Apply Zero Suppression

You can use zero suppression to ignore categories whose values fall into a low range.

For example, sales channels that are not active contributors to the bottom line are better left out of the report. You can also ignore categories that either do not apply to the report or that return zero values.

The default zero suppression settings remove rows or columns containing all zeros, missing values, overflow values, or the results of dividing by zero. You can do this for rows, columns, or both. Zero suppression only applies to the first measure.

When you apply zero suppression to a chart that supports multiple measures, the suppression is only applied to the first measure. You cannot apply suppression to a second measure, such as the line of a correlation chart, or to conditions when both measures are zero.

The **Explain** window includes information about your selected zero suppression options, and any IBM Cognos PowerPlay URLs created by the **Prepare Bookmark** command retain your changed settings, provided zero suppression was enabled for the crosstab.

Enabling zero suppression on a large reports may have a negative impact on performance.

Before you begin

The PowerPlay administrator can enable or disable zero suppression options for specific cubes or reports. If any of the options described below are not available, contact your administrator.

Procedure

1. Click the zero suppression options button  .
2. Click **Zero Suppression** to suppress zeros in the entire report, or click either **Rows Only** or **Columns Only**.
3. To change the default zero suppression settings, click the zero suppression options button and click **Options**.
4. Change the suppression settings and click **OK**.

   To remove the suppression, click the zero suppression button again.

   If you want to retain your changed settings after you return from a drill-through report or cube, remember to use **Return to Source**. Any other navigation method will cause your changes to be lost, and your report will revert to the default zero suppression settings.

Apply 80/20 Suppression

80/20 suppression removes rows or columns whose absolute values do not contribute to the top 80% of results.

PowerPlay summarizes the removed rows or columns into a single row or column named Other, such as in the following report..

Revenue as values	Department Store	Golf Shop	Outdoors Shop	Sports Store	*Other*	Retailers
2004	218,702,078	81,215,607	226,186,674	251,409,694	*137,223,414*	**914,737,467**
2005	234,093,351	117,475,668	353,378,729	299,825,656	*155,143,333*	**1,159,916,737**
2006	262,268,935	166,343,991	507,156,406	382,221,520	*179,941,348*	**1,497,932,200**
2007	166,878,294	128,767,474	407,281,116	288,785,273	*127,232,474*	**1,118,944,631**
Years	**881,942,658**	**493,802,740**	**1,494,002,925**	**1,222,242,143**	***599,540,569***	**4,691,531,035**

Figure 6. Report with 80/20 suppression

Procedure

Click the 80/20 suppression button  .
If a category labeled Other is not shown, all the categories in the report dimension contribute to 80% of the total.
To show all categories, click the 80/20 suppression button again.

Modify the Y-Axis

You can change some properties of the Y-axis.

For example, you can increase the number of gridlines to make it easier to distinguish the differences between categories that have similar values.

Procedure

1. Click the arrow to the right of the chart button  , and click a chart type.
2. Click the arrow to the right of the chart button and click **Chart Options**.

3. Click the **Scale** tab and select the options that you want:
   - To set the maximum or minimum scale value, select the **Use manual axis scale** check box, and enter a value in the appropriate box.
   - To turn grid lines on or off, select the **Show the gridlines** check box.

   For a 3D bar display, select the gridline boxes for the appropriate facings.
   - To reverse the axis so that the largest number is at the bottom, select the **Reverse Axis** check box.
   - To specify the number of ticks on the axis, select the **Number of Ticks** check box and enter a value in the box.
   - To specify the location of the axis, under **Axis Placement**, click either **Left**, **Right**, or **Left and Right.**

   The last three options are not available for 3D bar displays.
4. Click **OK**.

Resize Charts

You can resize a chart to a percentage of the screen.

Procedure

1. Click the arrow to the right of the chart button and click a chart type.
2. Click the arrow to the right of the chart button and click **Chart Options**.
3. Click the **General** tab.
4. Select the **Percentage of screen** check box.
5. In the **Height** and **Width** box, type a number between 10 and 500.

   To maintain a 1:1 aspect ratio in the resized chart, type the same number in both the **Height** and **Width** boxes.
6. Click **OK**.

Format Legends

You can use either an HTML legend, or an embedded legend.

An embedded legend has the advantage of being part of the display, and is included when the display is copied. However, because the embedded legend is part of the image, it can contain only a limited number of categories. An arrow indicates if some categories are not visible. An HTML legend lets you perform crosstab operations, such as drag and drop.

Procedure

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab.
3. Choose to use an HTML legend or an embedded legend.
4. If you selected an embedded legend, specify where you want it to appear in the display.
5. Click **OK**.

Add Rank Categories Based on Measure Values

You can add rank categories to your reports to show rank ordinals.

Ranking adds ordinals to a report so you can compare your categories to one another. For example, you have a report that outlines revenue for all your products. You add a rank category to this report to see which products generated the most revenue.

Categories are ranked by their value in a specific row or column. The rank ordinals appear in a new row or column. The labels and values of the rank category are italicized.

The rank results can be unsorted, meaning that they are not in numerical order, or they can be sorted in ascending or descending order. Rank categories and sort orders are automatically regenerated whenever there is a change to the report data. You can rank more than one row or column in the same report.

You cannot rank forecast calculation or total summary values.

If the rank option is not available, contact your administrator to enable the ranking feature.

Procedure

1. Click the column or row on which you want to base the rank category, and click the rank button  .
2. Change the ranking properties.
3. Click **OK**.

Hide Categories

You can selectively hide any category in a report, including precalculated categories that were inserted when the cube was created.

When you hide categories, the summaries in the report are not affected.

Procedure

Decide whether you want to hide one or several categories.

- To hide a single category, right-click the category you want to hide, and click **Hide Selection**.
- To hide more than one category, right-click a category and click **Hide/Show**. Move the categories you want to hide to the **Hidden Categories** box and click **OK**.
- To hide precalculated categories, click the display options button, and then from the **Display Options**, select the **Hide Calculated Categories Defined in the Cube** check box, and click **OK**.

Results

To show all hidden categories, click the display options button and then click **Reset**.

Show Short Names

You can switch between long and short category names in your report.

A short name is an optional property that is defined for any category in a cube. You may want to show short category names so that you can see all the rows or columns without scrolling. Short names appear in

- crosstab displays
- the dimension viewer
- drill-down views
- the **Explain** dialog box
- the **Calculations** dialog box
- exported PDF and CSV reports
- the **Find** dialog box
- the **Hide/Show** dialog box

When you show short names, long names will still appear for any category that does not have a short name defined in the cube.

Procedure

1. Click the display options button.
2. Click **Display Options**.
3. Select the **Show Short Names** check box.
4. Click **OK**.

Add a Title

You can create or edit a title for the report.

In addition to typing a name for the title, you can use variables in the report title. For example, you can use variables to show the cube file name and date in the report title. By default, the cube title, if defined by the IBM Cognos Transformer modeler, is used for the report title.

Procedure

1. Click the display options button, and click **Edit Title**.
2. Type the title and, if enabled by your IBM Cognos PowerPlay administrator, HTML tags to format the title.
3. To add information to the title using variables, select items from the **Variables** box, and click **Insert**.
4. To show the dimension bar when you export the report to PDF, select the **Display Dimension Bar Information** check box.
5. Click **OK**.

Related concepts:

"Valid HTML Tags in Report Titles"
The default server settings limit the embedded HTML content that you can use in the titles of reports. This helps to ensure that unwanted scripts are not run when a consumer views a published report. Your administrator can change the server settings to allow any valid HTML tag in a report title.

Valid HTML Tags in Report Titles

The default server settings limit the embedded HTML content that you can use in the titles of reports. This helps to ensure that unwanted scripts are not run when a consumer views a published report. Your administrator can change the server settings to allow any valid HTML tag in a report title.

The following HTML tags are valid when embedded HTML restriction is enabled:

- <I>, <B>, <U>,
 (with no attributes)
- <P> (with align, dir, style, class, and title attributes permitted)
- <SPAN>, <DIV> (with dir, style, and class attributes permitted)

To ensure XML compatibility, use closing brackets with all tags.

Unrecognized tags, tags with invalid attributes, and any tag containing a style attribute with unexpected values appear as text in the title.

Style Attribute Values

The style attribute, which is permitted on the <P>, <SPAN> and <DIV> tags, can have only the following values:

- font
- font-size
- font-weight
- font-style
- color
- background-color
- text-decoration

Some style elements are not permitted. For example, the font-family element is not recognized. The font-size element can have only numbers after it, and the color element should only be used with the rgb (#,#,#) format.

For example, to create a title in 24 point bold, red text, type the following in the Title Text box:

```
<p STYLE="font-size:24;color:rgb(255,0,0);font-weight:bold">My
Customized Report</p>
```

Show Multiple Measures in a Report

You can show multiple measures in a report.

When you use multiple measures, the measures appear as rows or columns and you can use many of the layout techniques you use for categories. For example, you can change the layout order by dragging a measure to a different location. Also, you can hide one or more of the measures. You can reorder only the top-level measures in the measures dimension.

Multiple measures are not appropriate for all display types. You cannot change to correlation display or scatter display if the report includes multiple measures.

Procedure

1. In a crosstab display, add measures to the report from the dimension viewer.
   - To add all measures, right-click the **Measures** folder, and click either **Replace Rows** or **Replace Columns**.
   - To add individual measures, click the measure and drag it to the highlighted area that appears above or below another measure.
2. To move a measure, click the measure and drag it to the highlighted area that appears between two other measures.
3. To maintain the measures layout for future use, save the report to the portal, export to .pdf or .csv format, or prepare a bookmark.

   When you close the cube, the revised order of the measures is not saved in the cube.

Use Layers to Show Multiple Categories in Your Report

You can use layers to present data in pages where each page is filtered on a different category from the same level in a dimension.

For example, you need a report that shows revenue by product for each retailer type. When you export the revenue by product report to PDF format, you choose to use layers based on the retailers dimension. The PDF report will show revenue by product for each retailer type on a separate page.

Procedure

1. Click the file button  and click **Export PDF**.
2. On the **Display** tab, select **Include Layers** and choose the dimension for which you would like to apply the layers effect.
3. Click **Export**.

Change the Patterns and Colors in a Display

To help highlight different categories in bar and pie displays, you can specify colors, patterns, or gradients for each series of bars or pie slices.

Patterns are especially useful when printing in black and white. For line displays, you can specify the color, line type and marker type of each line in the display.

PowerPlay has a 16-color palette. If a display requires more than 16 colors, colors are repeated in more than one series.

In a pie display, all categories whose values are less than 10% of the total display are grouped in a slice labeled Other. You cannot modify the default color of this slice.

Procedure

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Palette** tab.
3. Select the formatting that you want to apply.
4. Click **OK**.

Apply a Background Color

You can apply a color, pattern, or gradient to the background of the display. When you apply a gradient to the background, you can set the direction of the gradient.

Procedure

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Background** tab.
3. Specify the background formats that you want to apply.
4. Click **OK**.

Format Labels

You can customize the labels used in a chart display. For example you can create a custom chart title and format font properties.

One of the options for horizontal axis labels is to use a vertical or diagonal alignment of labels. These options require more display space than the default horizontal alignment. If the display does not include sufficient space for a vertical or diagonal alignment of labels IBM Cognos PowerPlay will use the default horizontal alignment.

Procedure

1. Click the arrow to the right of the chart button and click **Chart Options**.
2. Click the **Labels** tab.
3. Select the label that you want to edit.
4. Specify the properties for the label.

   If the font you require is not listed, contact your administrator.
5. Click **OK**.

Add Format Markers

You can add markers to simple line, multiline, and correlation displays.

Procedure

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab and select whether to show markers and values.
3. Click the **Palette** tab, and select a marker type.
4. Click **OK**.

Chapter 4. Distributing Results

Distribute your results by

- saving the IBM Cognos PowerPlay report to shared folder in IBM Cognos Connection
- exporting the report to a different file format, such as Microsoft Excel (.xls) format
- creating a bookmark to the report that you can save in your Web browser or send to others
- printing the report
- reusing graphical elements from a report, such as a chart, in other applications

Create a Report

After opening and exploring a data source, or opening and modifying an existing report, you can create a new report in IBM Cognos Connection.

When you create a report you have the option to save the report to **Public Folders**, **My Folders**, or you can create a new folder to use as the save location.

After you save a report from IBM Cognos PowerPlay Studio, report authors working in PowerPlay Client can open the report if they have access to the folder that contains the report. Because of feature differences between PowerPlay Studio and PowerPlay Client, a PowerPlay Studio report may look different in PowerPlay Client. For example, some chart formatting applied in PowerPlay Studio, such as patterns and gradients, axis placement, and titles, will not appear in the report in PowerPlay Client. If you know a report will be used in PowerPlay Client, avoid report features that will not be available in the report in PowerPlay Client.

Before you begin

To ensure that PowerPlay Client users can open and save the report, do not use characters in the report name that may not be supported by the regional and language options of the computer where PowerPlay Client is installed, or characters that are not permitted in Microsoft Windows file names such as : " / \ | ? *.

Procedure

1. Click the save as button.

   If prompted, provide authentication information.
2. Follow the steps in the wizard, and click **OK**.

   You must have write permissions to the portal location that you choose.

   A description or screen tip can provide valuable information for some types of reports. For example, you create a report based on a package that uses data source connections to more than one PowerCube. When you publish the report, specify the PowerCube connection name in the description or screen tip so report consumers know what connection to select when they open the report.

Results

The report reappears in your Web browser and is also available for other users from the IBM Cognos portal.

Replace Existing Reports

If you change a report that was already published to the IBM Cognos portal, you can replace the report for other report consumers.

You can replace a report only if you access the report from the portal and if you have write access to the portal location.

Procedure

1. From the IBM Cognos portal, open a report.
2. Modify the report.
3. Click the save button.

Results

The report information is replaced in the portal location, and the report remains open in your Web browser.

Exporting Data to Alternate Format

You can export the data in a report for use in other applications.

You can export data in

- delimited text format (.csv) for use in a variety of applications
- Microsoft Excel formats
- .pdf format to preserve report formatting and distribute the report for use in Adobe Reader

Export Data in CSV File Format

You can export reports as delimited text format.

Delimited text format is one of the most popular export formats, because the resulting file can be used as an import source by many applications. The delimited text format ensures a high degree of compatibility in multi-language environments. It also ensures reliability when importing into other applications such as Microsoft Excel.

PowerPlay uses the following format conversions when you create a .csv file.

Table 2. Conversion formats for CSV files

Format	Conversion Details
Numeric data	The decimal symbol for the locale is used, even if the format or pattern of the number contains an explicit decimal that differs from the locale. The digit grouping symbol (the symbol used to group large numbers such as thousands in the US locale) is not used in the CSV export. The negative sign symbol but not the format of the locale is used. This may also be different from the explicit format used for that number. The negative symbol is always leading. For example, for a German locale of DE_DE, a number that was formatted as (765 000.45) is exported to CSV format as -765000,45.
Currency data	Currency values follow the same rules as numbers. The currency symbol is not exported. For example, if the locale is EN_US, and the format of the number in an IBM Cognos PowerPlay report is $123,456.00, PowerPlay exports 123456.00.
Character data	In some products, you can optionally allow quotes to be put around the text. This technique ensures that a text field containing the list separator (such as a comma) is not interpreted as multiple fields in the exported file.
Date and time data	Dates are exported in ISO format, *YYYY-MM-DD*. Time is exported as ISO format, *hh*:*mm*:*ss*.The hour value (*hh*) uses the 24-hour clock. **Note**: In PowerPlay, the date is defined in the Transformer model and is exported as text.

You can view this data in any application that supports comma separated value files, such as Microsoft Excel. If you do not have Microsoft Excel installed, you can save the .csv file to your computer, and then open the file in another application.

If your administrator enabled the Dimension Line in CSV Export setting, the dimension line appears in your .csv file.

If you have Microsoft Excel installed, you can save the comma-separated value file (.csv) to your computer or open the data directly in Microsoft Excel.

Before you begin

To open the data directly in Microsoft Excel, your Web browser must be configured to recognize the CSV format.

To configure Microsoft Internet Explorer Web browsers for Export CSV, you must set the MIME type for the Microsoft Excel Comma Separated Values File format to **text/x-csv** for your operating system.

Procedure

1. Create a report.
2. Click the file button  and click **Export CSV**.
   You are prompted to open the file or save it to your computer.

Results

If the cells in your .csv file appear jumbled together, ensure that the regional settings for PowerPlay are consistent with the regional settings of your operating system.

Export Data to a Microsoft Excel Format

You can export reports to Microsoft Excel.

You can export a maximum of 65,536 rows, including any headings. For large queries, export to .csv format.

Procedure

1. Create a report.
2. Click the file button and select a Microsoft Excel format.
   You are prompted to open the file or save it to your computer. To make it easier to identify the file at a later time, choose save to change the default name.

Export Data in PDF Format

You can export reports to PDF format.

PDF export settings ensure that PDF output closely matches the original report. You can customize the pagination, word-wrap, status line, paper size and orientation of your PDF report output so that the PDF matches the HTML display as closely as possible. As well, you can choose to show borders that aid report readability. You can also show layer views filtered on each sibling in a dimension level.

If you want to present data in pages, where each page is filtered on a sibling of a dimension level, you must first select a filter in the dimension that you are using for layers. This filter specifies the dimension whose children you want to use as layers in the PDF report.

Procedure

1. Create a report.
2. Click the file button and click **Export PDF**
3. Select the paper, display, and pagination properties.

4. Decide whether you want to use the settings for the current report or all reports.
   - Click **Apply** to save the setting for use in other reports and then click **Export**.

     The **Include Layers** and **In Dimension** settings must be specified for each PDF export.
   - Click **Export** to use the settings in only the current report.

Results

To return to the default PDF export settings, click **Reset**.

Prepare a Bookmark

Bookmarks are a convenient way to return to specific reports.

For example, you bookmark a report showing sales figures filtered for a specific set of products. You then select the name of the report from the list of bookmarks in the Web browser. The report opens in the browser and shows current data.

When you prepare a bookmark, IBM Cognos PowerPlay defines a complete URL for the report. The URL includes information about the categories in the report, data formats, and filtering that is not usually included in the URL. After you prepare the bookmark, you can add the URL to your list of bookmarks or favorites in your Web browser.

Procedure

1. Create a report.
2. Click the file button and click **Prepare Bookmark**.

   The complete URL for the report appears in either the Location or the Address box of your Web browser.
3. Use the features of your Web browser to add the bookmark to the list of Web browser bookmarks or favorites.

Print Reports

You print reports from IBM Cognos PowerPlay Studio Viewer using the print options in Adobe Reader.

Procedure

1. Open a report in PDF format.
2. On the Adobe Reader toolbar, click the print button.

   Do not use the print command in your Web browser to print reports.

Reusing Graphical Displays in Other Applications

If you use Microsoft Internet Explorer, you can reuse charts and chart legends in other documents, such as Microsoft Word documents or Microsoft PowerPoint presentations.

The copied content will be an embedded graphical element in the alternate application. A link to the original data source is not maintained.

Chart legends are created using HTML tables. If the target application does not support the HTML formatting, the legend may look different.

Procedure

1. Right-click a chart or chart legend, and click **Copy to Clipboard**.

   Tip: If **Copy to Clipboard** is not available, press Ctrl while you right-click.
2. Open the document into which you want to paste the chart, and click **Edit**, **Paste**.

Chapter 5. Forecast Formulas

You can make predictions about the future performance of your business based on past data by using one of these time series forecasting methods: Trend, Growth, or Autoregression.

All IBM Cognos PowerPlay forecasting methods use univariate techniques, which means that each category, whether a row, a column, or a summary row or column, is treated as a separate time series.

Trend Forecast Formula

The formula for Trend forecasting is

$y = at + b$

where y is the dependent variable (for example, revenue), t is the independent time variable,

$$a = \frac{N\left(\sum_{i=1}^{N} t_i y_i\right) - \left(\sum_{i=1}^{N} t_i\right)\left(\sum_{i=1}^{N} y_i\right)}{N\left(\sum_{i=1}^{N} t_i^2\right) - \left(\sum_{i=1}^{N} t_i\right)^2}$$ (the slope of the trend line)

and

$$b = \frac{\left(\sum_{i=1}^{N} y_i\right)\left(\sum_{i=1}^{N} t_i^2\right) - \left(\sum_{i=1}^{N} t_i\right)\left(\sum_{i=1}^{N} t_i y_i\right)}{N\left(\sum_{i=1}^{N} t_i^2\right) - \left(\sum_{i=1}^{N} t_i\right)^2}$$ (the intercept)

The coefficient of determination, a measure of how closely the trend line corresponds to your historic data, is defined by the following equation:

$$R^2 = 1 - \frac{SSE}{SST}$$

where

$$SSE = \sum_{i=1}^{N} \left(y_i - \hat{y}_i\right)^2$$ (sum square of residual errors)

and

$$SST = \left(\sum_{i=1}^{N} y_i^2\right) - \frac{\left(\sum_{i=1}^{N} y_i\right)^2}{N}$$

Growth Forecast Formula

The formula for Growth forecasting is

$y = ba^t$

where b is the intercept and a is the constant growth rate.

IBM Cognos PowerPlay uses a logarithmic transformed regression model to solve this equation.

Autoregression Forecast Formula

The formula for Autoregression forecasting is

$$y_t = \sum_{j=1}^{M} d_j y_{t-j}$$

where

$$\sum_{j=1}^{M} \phi_{|j-k|} d_j = \phi_k \qquad (k = 1, \ldots, M)$$

(d_j are the linear prediction (LP) coefficients)

and

$$\phi_j \equiv \langle y_i y_{i+j} \rangle \approx \frac{1}{N-j} \sum_{i=1}^{N-j} y_i y_{i+j}$$

(auto-correlation of the historic series)

IBM Cognos PowerPlay uses Burg's algorithm and a data window (M) equal to half the number of data points to solve these equations.

Appendix. Troubleshooting

This chapter describes some common problems you may encounter. For more troubleshooting information, see the IBM Cognos PowerPlay *Migration and Administration Guide*.

Error After Inserting a Calculation in PowerPlay Studio

After inserting a calculation, you may receive a browser error and the calculation action does not complete successfully. The problem can occur on Microsoft Internet Explorer 7 and Mozilla Firefox.

There is currently no workaround for this problem in Internet Explorer 7 and Mozilla Firefox. The problem does not exist when using Internet Explorer 6.

Error When Opening the Link in the Email for a Scheduled Report

When a user schedules a report to run and requests the delivery option to be email, only the most recently sent email will contain a valid link. Any previous email will contain a link to a report that no longer exists and result in either a blank page or a page not found error.

Page Error When Editing a Chart Title in Japanese

When you set the font of a chart title to a Japanese font, you may get an error. This error occurs if the selected Japanese font is not an UTF-8 font.

To fix this error, select a UTF-8 Japanese font.

Firefox Browser Reports Errors When Launching a PowerPlay Report in PowerPlay Studio

The Mozilla Firefox 1.5 browser reports non W3C CSS compliant styles as errors in the JavaScript console. This includes many Microsoft Internet Explorer specific styles and some badly formatted styles. These errors do not affect the successful loading of IBM Cognos PowerPlay reports and cubes.

Long Strings Are Truncated

Word-wrapping works only in languages that use a space to separate words.

To force a word wrap in languages such as Chinese, Korean, Japanese and Thai, insert a single-byte space at an appropriate place to simulate a word break.

Hebrew Text Displayed in Charts

In some chart elements, bi-directional Hebrew text may be displayed in a "logical" order rather than the expected "visual" order. For more information, go to http://people.w3.org/rishida/scripts/bidi/

After Exporting to PDF the Label for the OTHER Category in a Pie Chart Changes to Actual Category Name

When creating a pie chart in IBM Cognos PowerPlay Studio, the OTHER category is generated and is visible in the legend. After exporting to PDF, the correct category name replaces OTHER in the legend. This is the expected behavior.

Unreadable or Inaccessible Display

If you use Microsoft Internet Explorer 7, you may get an unreadable display with higher zoom settings. For example, some display elements may overlap.

To correct the display, reduce the Internet Explorer 7 zoom setting.

Horizontal Axis Labels Do Not Display Vertically or Diagonally

One of the options for horizontal axis labels is to use a vertical or diagonal alignment of labels. These options require more display space than the default horizontal alignment. If the display does not include sufficient space for a vertical or diagonal alignment of labels IBM Cognos PowerPlay Studio uses the default horizontal alignment.

Report Context is Not Passed Correctly When Drilling Through to Another Package

When you drill-through from IBM Cognos PowerPlay Studio or IBM Cognos Report Studio to a different package, information from the source may not be passed correctly to the target object. For example, you are working with a report that shows Cooking Gear, Tents, Sleeping Bags, Packs, and Lanterns as columns. 2007, 2008, and 2009 appear as rows. When you drill through to a different package, 2007, 2008, and 2009 do not appear as rows as expected.

This situation can occur when the drill-through target is a package and the drill-through action is set to **Open with PowerPlay Studio**.

Report Viewed from Output Versions List Always Opens in Cognos Viewer

When you view a saved IBM Cognos PowerPlay report output version, it will always open in Cognos Viewer, even if the properties are set to PowerPlay Studio Viewer.

To view the report in PowerPlay Studio Report Viewer, run the report interactively from the IBM Cognos Connection folder using **Run with options**.

Report Context is Not Passed As You Expect When Drilling Through to Another Package

Drill-through access in IBM Cognos Business Intelligence is different from IBM Cognos Series 7. If you are familiar with IBM Cognos Series 7 drill-through behavior, report context will be passed differently in some drill-through situations in IBM Cognos BI.

Using drill-through definitions in IBM Cognos BI, you can set up drill-through access between different packages. This type of drill-through definition is stored in the source package. The drill-through definition also specifies a default action for opening the target, such as **Open with PowerPlay Studio**. This drill-through option can produce different drill-through results compared to IBM Cognos Series 7. For example, For example. when you drill-through to a package that normally has Years on rows, Years will be replaced by the first drill-through parameter passed to the target.

To reproduce the IBM Cognos Series 7 behavior, create a report based on the default view of target package and then use the report as the drill-through target.

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